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REMARKS/ARGUMENTS

In the Office Action dated July 29, 2004, Claims 1-14 are pending, including independent Claims 1 and 9. Claim 14 is rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 2, 5, 8-11 and 14 are rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 6,119,574 to Burky, et al. Claims 1, 2, 8, 9, and 14 are rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 6,279,449 to Ladika, et al. Claims 1, 2, 8, 9, and 14 are also rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Patent No. 6,029,558 to Stevens, et al. Claims 3, 4, 6, 7, 12, and 13 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim.

With regard to the rejection of Claim 14 under 35 U.S.C. § 112, second paragraph, the Office Action states that the phrase "the origination" lacks antecedent basis. Applicant respectfully disagrees. Claim 14 is dependent on Claim 9, which recites a method of attenuating a pressure blast to shield a protected area, including "spraying particulates to form a shield extending between an origination of the pressure blast and the protected area such that the shield attenuates the pressure blast from the origination." Thus, the "origination" recited in Claim 14 clearly refers to the "origination of the pressure blast" recited in Claim 9. Nevertheless, in order to further clarify Claim 14, Applicant has amended the claim to refer specifically to "the origination of the pressure blast." This amendment is unrelated to the patentability of the claim.

Applicant now addresses the rejections made under 35 U.S.C. § 102 (b). First, regarding each of the rejections of independent Claim 1, Applicant respectfully traverses. Claim 1 recites a pressure attenuation shield for attenuating a pressure blast and shielding a structure. The shield comprises "a spray of attenuation material disposed proximate a periphery of the structure and between an origination of the pressure blast and the structure such that the shield attenuates the pressure blast by at least about 14.7 psi within a thickness of less than about 1 meter of the spray." The recited magnitude per thickness of the attenuation is not taught or suggested by any of the cited references. In particular, Burky, et al. illustrates in Figure 7 that the total attenuation of the blast suppression system disclosed therein can be greater than 14.7 psi. However, Burky,

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et al. does not teach that the blast suppression system can achieve such suppression within a thickness of less than about 1 meter of the spray. In fact, Burky, et al. contemplates spraying the suppressant over a relatively large area. For example, in one arrangement described by Burky, et al., 75% of the suppressant is projected to a height of approximately 50 feet from a distance of about 150-250 feet, with the suppressant landing on the area directly surrounding a large vehicle bomb. "The remaining 25% of the suppressant would be projected through a few large-capacity fog nozzles to a height of approximately 30 feet to provide a wide curtain of suppressant material of relatively small droplet size." Col. 8, lines 8-27. In any case, Burky, et al. does not disclose a shield that attenuates by at least about 14.7 psi within a thickness of less than about 1 meter of the spray, as claimed.

Ladika, et al. describes a rapid deployment countermeasure system in which a deployment module 80 provides a rapid volumetric expansion of a plurality of tubes 30, e.g., a gas generator 90, such that anti-ballistic blankets 150, 160 are rapidly positioned to form a barrier. The Office Action cites the gas generator 90 as corresponding to the spray of attenuation material recited in Claim 1. However, Applicant asserts that Ladika, et al. does not teach or suggest inflating the tubes 30 with an attenuation material. That is, in the system of Ladika, et al., the blankets 150, 160 form the barrier, not the gas in the tubes 30. Moreover, Ladika, et al. does not teach or suggest a spray of attenuation material disposed "such that the shield attenuates the pressure blast by at least about 14.7 psi within a thickness of less than about 1 meter of the spray." That is, Ladika, et al. does not teach any magnitude of attenuation per thickness. More importantly, however, Ladika, et al. does not teach that such attenuation can be achieved "within a thickness of less than about 1 meter of the spray." Instead, Ladika, et al. describes a system in which the blankets 150, 160 – and not the gas in the tubes – prevents or slows a projectile.

Similarly, Stevens, et al. describes protection system 10 including a gas generator 210 for inflating an air bag 25 with surfaces 220, 230, 245, which are made of SPECTRA®, KIVLAR®, or other polyethylene fabric. Col. 5, lines 20-30. The Office Action does not cite any particular member of the system 10 as corresponding to the claimed spray of attenuation material of Claim 1, and Applicant finds no such teaching. In particular, Applicant submits that the surfaces 220, 230, 245 form the barrier, not the gas in the bag 25. Moreover, like Ladika, et

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al., above, Stevens, et al. does not teach or suggest a spray of attenuation material disposed “such that the shield attenuates the pressure blast by at least about 14.7 psi within a thickness of less than about 1 meter of the spray.” That is, Stevens, et al. does not teach any magnitude of attenuation per thickness. More importantly, however, Stevens, et al. does not teach that such attenuation can be achieved “within a thickness of less than about 1 meter of the spray.” Instead, similar to Ladika, et al., Stevens, et al. describes a system in which the surfaces 220, 230, 245 of the bag 25 – and not the gas in the bag 25 – prevents or slows a projectile.

Accordingly, Applicant submits that Claim 1 is not anticipated by any of the cited references. Further, Claim 9 as amended recites “spraying particulates to form a shield extending between an origination of the pressure blast and the protected area such that the shield attenuates the pressure blast from the origination by at least about 14.7 psi within a thickness of less than about 1 meter of the particulates of the shield.” Thus, Claim 9 is therefore not anticipated by any of the cited references for the same reasons set forth above in connection with Claim 1. Further, Claim 9 recites “spraying particulates to form a shield.” In this regard, Applicant notes that neither Ladika, et al. nor Stevens, et al. teaches spraying particulates and instead each teaches the use of a gas for filling a plurality of tubes or a bag.

Each of the remaining claims rejected under 35 U.S.C. § 102(a), i.e., Claims 2, 5, 8, 10-11, and 14, is dependent on one of independent Claims 1 and 9 and is therefore patentable over the cited references for the same reasons as the independent claims. Further, Applicant submits that the dependent claims provide additional bases of distinction over the cited references. For example, Claim 5 recites a pressure attenuation shield according to Claim 1 “wherein said attenuation material comprises gaseous bubbles and said shield extends through a liquid medium.” Claim 5 stands rejected solely over Burky, et al., but Applicant finds no corresponding teaching in Burky, et al.

Claim 8 recites a pressure attenuation shield according to Claim 1 “wherein a three dimensional packing factor of said attenuation material is non-uniform across a thickness of the shield and generally increases in a direction from the origination toward the structure.” Similarly, Claim 14 as amended recites a method according to Claim 9 further comprising “spraying the particulates such that the packing factor generally increases in a direction from the

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origination of the pressure blast toward the structure." Claims 8 and 14 are rejected over each of Burky, et al., Ladika, et al., and Stevens, et al. However, none of the references disclose such a three-dimensional, non-uniform packing factor.

For the foregoing reasons, Applicant submits that each of Claims 1-14 is allowable.

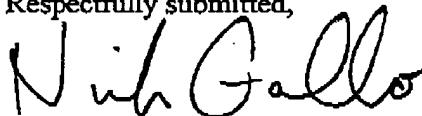
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CONCLUSIONS

In view of the amendments and remarks presented above, Applicant submits that the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact Applicant's undersigned attorney in order to resolve any remaining issues.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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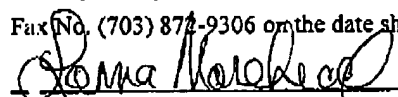
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